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ORIGINAL ARTICLES.

TOOTHED SCISSORS FOR THE LENS CAPSULE ABSCISSION.*

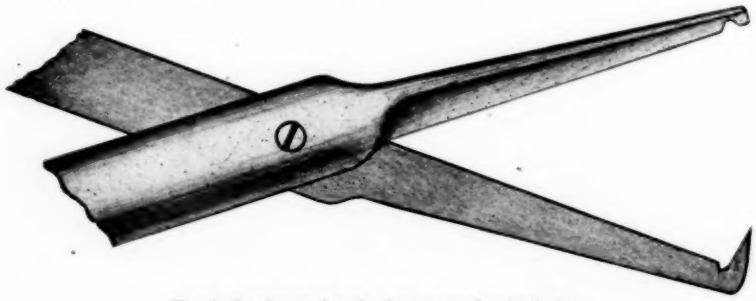
By A. E. Ewing, M.D.,
ST. LOUIS, MO.

An experience with the De Wecker scissors in the removal of the anterior capsule of the lens was related in the American Journal of Ophthalmology for October, 1910, in which a clear pupil was obtained. The same article also contains the suggestion that toothed scissors might prove to be more efficient for this purpose. Since then several opportunities have presented themselves for trial with this form of scissors, the most successful arrangement being a short tooth at the end of the left blade, or a mere nick in the blade near the end, and a long sharp tooth on the right blade at the end, with a nick at its base. The edge of the left blade naturally inclines backward and readily cuts through the capsule; the edge of the right blade, however, sets a little forward of the back of the blade and may glide over the capsule. This is prevented by arming the right blade with the sharp tooth, about one millimeter long, located in the plane of the blade at a right angle to its edge and having the point set a little backward. This tooth readily engages the capsule and is followed by the edge of the blade. In this way each blade is made

*Read before the St. Louis Ophthalmological Society, May 8, 1911.

to cut a clean bite from the pupillary area of the capsule with no dragging on the zonule except the very little caused by the small nicks at the base of the teeth. These nicks fold the abscised capsule together between the teeth and it is brought away as the instrument is withdrawn.

Provision is made for the ready entrance of the blades without injury to the capsule or to the posterior surface of the cornea by having them blunt or somewhat rounded at the end, and the point of the long tooth may be prevented from hanging in the tissues by partially opening the blades as they are introduced so the end of the left blade may cover or conceal it until the instrument is in position to be opened as wide as may be desirable for the central removal of the capsule. The angle of the blades to the handle should be about one hundred and thirty-five degrees.



Toothed scissors for the lens capsule abscission.
(Blades greatly enlarged to show their construction.)

The construction of the nicks and the teeth is clearly illustrated in the accompanying enlarged diagram. This may be used with any type of scissor mechanism that may be preferred by the operator.

A CASE OF PULSATING EXOPHTHALMUS WITHOUT BRUIT.

By Harry Friedenwald, M.D.,
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Regina Sewell, colored, aged 20, applied for treatment at the Baltimore Eye, Ear and Throat Charity Hospital Dispensary on November 11, 1909, because of pain in her right eye, which she said had been bulging out of the socket for eleven or twelve years. The pain had come on during the past year, though her condition had not otherwise changed. There was no history of injury to the eye or to the head. She had had whooping cough when 14 years of age, but the eye, she says, had been in the present condition even at that time and to her knowledge there had

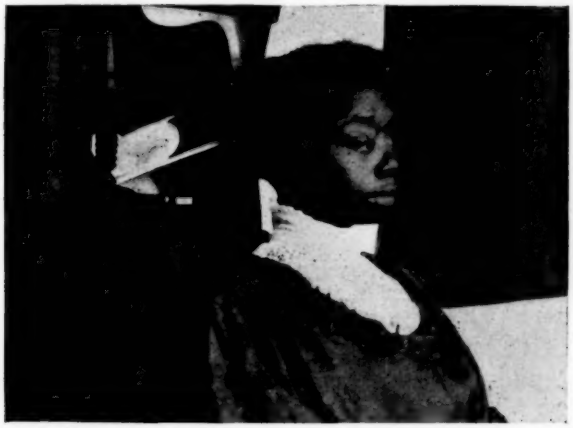

Fig. 1.

been no change. For some months she had heard a thumping noise in the right ear especially at night; there was no impairment of hearing.

Present Condition.—The right eye is displaced forwards and downwards; is very prominent and pulsates so markedly that the pulsations can be distinctly seen at a distance of many feet and they are also very easily palpable. The right eye is about 12 mm. lower than the left. It is forced forward at least 5-6 mm. with each pulsation—but even in the diastole it is displaced forwards about 6 mm. (See Fig. 1 and 2.) The prominence of

the eyeball is not affected by changes in position, leaning forward, lying flat on the back, etc., but the eyeball is easily pushed back into the orbit without producing any discomfort. Vision L.E. 16/15; R.E. 16/200, and the field of vision in the right eye is perfect for form and colors. The movements of the eyeball are normal except in the upward direction. There is constant diplopia. The pupils are equal and react well to the light. The patient closes the right eye imperfectly. The lids, conjunctiva and anterior portion of the eyeball are normal. The right disc is much paler than the left. The bloodvessels are not in the least congested. There is no tortuosity.

Dr. Th. Chew Worthington examined the nose and found the bulla ethmoidalis very much distended and extending down

FIG. 2.

to the lowest margin of the middle turbinate, and hard to the touch.

The patient was examined frequently without noting any changes except that the pain would disappear from time to time. At times a blowing sound could be heard along the margin of the right sterno-mastoid, at other times it was absent.

Along the posterior margin of the left sterno-mastoid there is a short well marked blowing sound, systolic in time. This sound is heard best just above the clavicle. There is a distinct hum over the insertion of the left sterno-mastoid. This is localized and is only heard in the upright position.

The heart sounds are normal and clear; pulse 85; blood pressure varied between 115 and 135.

On December 24, 1909, X-ray plates were made by Dr. Albertus Cotton, antero-posteriorly and laterally. He reports:

"Anterior posterior view shows frontal and ethmoidal sinuses normal. Right orbital cavity larger and extended lower down than the left.

"The lateral view shows enlargement of pituitary fossa, and irregularity in outline. Otherwise the lateral view is normal."

This case presents a number of interesting features. First, the early age at which the exophthalmus appeared is exceptional, as is also the stationary character. The absence of any sign of congestion about the exterior of the eyeball would indicate a circumscribed vascular derangement which does not affect the venous outflow from this portion of the eyeball or from the retina. The examination which could be made without difficulty did not reveal any palpable growth in the orbit and yet this cannot be excluded, for such a growth may be too soft and ill-defined to be palpable.

The most curious feature of the case is the absence of all bruit about the orbit in spite of the marked pulsation. This is exceptional and I have not found any cases similar in this respect. It is for this reason that I desire to place the observation on record.

CAUSES AND TREATMENT OF TEMPORARY PARTIAL AMAUROSIS.

A. Pichler (*Wiener Klin. Woch.*, Jan. 12, 1911) says that attacks of recurring scintillating scotoma, from which he suffers himself, are both analogous to migraine and amenable to the same treatment and preventive measures. He has studied fifty-three cases and finds in most of them an hereditary predisposition which is increased by any thing tending to weaken the nervous system or induce vasomotor disturbance. While it is impossible to influence the partial blindness, the succeeding headache may be greatly lessened or even prevented by the use of sedatives. If work be discontinued and the patient lie down upon the first symptoms of the attack it may frequently be cut short. Out of his fifty-three cases, Pichler found pronounced neurasthenia in thirty-nine, and about this same number stated that long, close use of the eyes induced an attack. The actual underlying cause should be sought in each case and removed if possible.

SOME FURTHER OBSERVATIONS ON THE ÆTIOLOGY OF CERTAIN CASES OF CONJUNCTIVITIS AND ASTHENOPIA.*

By J. F. Shoemaker, M.D.,
St. Louis, Mo.

In the paper on Ætiology and Treatment of Certain Forms of Conjunctivitis, published in the American Journal of Ophthalmology, in January, 1910, I called attention to the fact that intestinal toxæmia not infrequently causes a form of conjunctivitis which is very rebellious to local treatment, but which generally yields very promptly to such treatment as will stop the absorption of poisons from the intestinal canal. It was pointed out that the conjunctiva, being composed of epithelium and substantia propria,—the latter containing numerous bloodvessels,—might be expected to become irritated and inflamed by such poisons circulating through it, just as the epithelium of the skin, lungs and kidneys or the walls of the blood vessels in other parts of the body become affected. It was stated that there was nothing characteristic of this form of conjunctivitis to distinguish it from other forms that were purely local, but that, the diagnosis had to be made from the history of indigestion or constipation, together with other symptoms of autointoxication.

At the meeting of the American Medical Association last year, before the Section on Ophthalmology, Dr. Hiram Woods presented a paper on Autointoxcation and Allied Intestinal Troubles as a Possible Cause of Certain Vascular and Functional Disturbances of the Eye, in which he stated that in addition to inflammation of the margin of the lids and of the conjunctiva, he had observed certain functional disturbances of the ciliary muscle caused by autointoxication. Recurrent circumcorneal injection, recurrent asthenia of the ciliary muscle, spasm of accommodation, and the condition known as hysterical accommodation spasm were mentioned by him as being caused by intestinal toxæmia. His observations prompted him to say that ocular disturbance may result from conditions in the intestines which do not essentially produce toxic products.

From a further study of the subject I am convinced that autointoxication will more and more frequently be recognized as be-

*Read at the meeting of the St. Louis Ophthalmological Society, May 8th, 1911.

ing responsible for both the class of cases referred to in my former paper and the other class referred to by Dr. Woods. At this time I wish to report a number of cases of a different type from those referred to heretofore. The first is that of a man about 32 years of age, who consulted me in April, 1909, giving the following history: Had trachoma when a child. The past ten years, each spring when the weather gets warm the eyes smart and water considerably. This continues more or less severe all during warm weather but disappears as soon as it gets cool. Some secretion, but not much. Distant and near vision is perfect. No headache and no other trouble than the smarting and watering of the eyes. General health good. His vision was 18/15+, and he read Jaeger No. 1 at 5 inches, with either eye. Examination of the eyes showed a velvety condition of the palpebral conjunctiva especially on the upper lids, with some cicatricial tissue, but no especial inflammatory symptoms. He was treated with astringents and different collyria which relieved the trouble somewhat but never removed it completely while the warm weather lasted, so that I saw him at intervals of a few days to a few weeks until October 15th, when his visits ceased. The following extract from a letter received from him in November, 1910, may interest you: "You will recall that when you were treating my eyes you assured me that, while you could not restore my eyes to normal condition, you would make them comfortable, and I continued treatment with you on the strength of that assurance. As soon as the weather began to warm up this spring my eyes resumed their old condition as severe as before your treatments. After suffering several weeks, at the solicitation of a friend, I visited his family physician, a homeopathist, who said there was nothing the matter with my eyes, but that the trouble was in my system. I made six visits to his office at intervals of two weeks, took internally contents of six small phials of medicine and am cured absolutely and my eyelids are normal without a drop of medicine having been put in my eyes."

While this patient is not in a position to state that his eyelids were put in an entirely normal condition by the homeopathic internal treatment, yet I think we may take his word that he was relieved of his discomfort by that treatment, whereas months of local treatment had at best only partially relieved it. How do we account for this? Evidently some toxic substance circulating in the blood was irritating certain branches of the fifth nerve sufficiently to cause the smarting and watering of the eyes and no amount of local treatment would remove that irritation.

What this toxic substance was I do not know. There was nothing to lead me to attribute it to intestinal toxæmia.

The second case is also one with old trachoma. Mrs. E. J., aged 60, was first seen by me February, 1907, at which time she complained of having a great deal of photophobia. She stated that she had been suffering with granulated lids for over twenty years. During the past year she had been continuously under treatment of a reputable oculist without much improvement. Her general health was not good. She had frequent attacks of grippe. Her lids were found to be quite smooth, rather velvety. The corneæ were opaque over the upper half of the pupils from previous pannus. No ciliary, but considerable conjunctival injection. She responded to treatment very slowly and had a number of relapses but was comparatively comfortable several times for periods of six months or more. During the relapses her eyes looked very little if any worse than when they were comfortable, but at such times she always complained of photophobia and some lacrimation. In November, 1910, she reported that she had gotten along very well the six months preceding until she had taken an attack of grippe. Since then her eyes have been smarting, burning and watering a great deal and are sensitive to light. Although she was seen each day and given the local treatment which seemed to be indicated, very little improvement followed. Calomel and intestinal antiseptics were administered with little if any benefit. She was placed in the hospital where she was seen once and often twice daily, applications of strong solution of silver nitrate were made and collyria containing local anæsthetics were used, as was also dionin, with absolutely no relief. Atropin was tried but the first application promptly set up a dermatitis and closed the eyes with marked œdema of the lids. She suffered with intolerable itching of the eyes which often kept her awake at nights. After three weeks of this torture, when both patient and physicians were nearly in dispair she developed facial neuralgia. For the relief of this she was given good sized doses of aspirin which promptly relieved the neuralgia. The next day after taking the aspirin, the photophobia, lacrimation, and the itching and smarting of the eyes were better than they had been for weeks. The aspirin was continued and under its use the symptoms improved very greatly so that she soon become comfortable. Unfortunately the aspirin upset her stomach and it had to be discontinued. Without doubt this is a case where some toxic substance was irritating certain branches of the fifth nerve supplying the eyes and hence local treatment of the eye afforded

no relief whatever. The same poison irritating the superior maxillary division of the fifth nerve was responsible for the facial neuralgia. The nature of the poison I do not know. The fact that aspirin gave such prompt relief might suggest that it was uric acid and yet we know that aspirin is a nerve sedative and often relieves pain that is not caused by uric acid.

The following case, however, appears to be one in which uric acid was responsible for certain asthenopic symptoms that are not altogether uncommon. Mrs. B. consulted me April 28, 1910. Her distant vision was good and she had no trouble with her eyes except when she read and sewed. She could not see well enough to do either well without glasses, and while she could see nicely for a few moments with the reading glasses she had, her eyes very soon became decidedly uncomfortable and suffused with tears so that everything was blurred. It was impossible for her to read more than five or ten minutes at a time. She complained also of frequent attacks of vertigo. She was wearing, O.D.+1.25 D.S., O.S.+1.25 D.S.⊃+.50 D.C. ax. 90, for distance, with +1.50 D.S. added for near work. This correction gave her vision of 18/15+ with either eye and she read Jaeger No. 1 at 12 inches. My tests showed her distance glasses to be practically correct. As she had 3 degrees of esophoria at reading distance I gave her stronger reading glasses thinking this might possibly be the solution of the problem. After trying these for a time she returned and reported that she could read no better with the new glasses than with her old ones and that her eyes were smarting and very uncomfortable a good deal of the time. There being no conjunctivitis to speak of I suspected that autointoxication might be at the bottom of her trouble. Upon inquiry concerning her digestion she told me that she had considerable trouble in this respect and had been told that she had dilatation of the stomach. With this history, she was referred to Dr. H. W. Soper, who found no condition of that kind but a marked uric acid diathesis. Treatment of this condition resulted in complete relief of the attacks of vertigo and very marked improvement of the ocular symptoms. The smarting of the eyes soon disappeared and she could read with much more comfort than previously. While she still is troubled somewhat with lacrimation at times it is not nearly so bad as it was and only annoys her when she reads too long a time.

About three weeks ago a gentleman from an Illinois town came to me complaining of having difficulty in using his eyes for near work the past six months. Whenever he attempted to read the

left eye ached severely and watered so that he had to stop. He stated that the eye often felt as if something were pulling it out. He had some pain at the root of the nose. Several weeks before he suffered considerably with neuralgia on the left side of his face. This had about disappeared when he came to me. He has some trouble with his digestion and his bowels are sluggish. He had consulted one of our prominent oculists last November, who gave him new reading glasses which afforded him no relief. During the winter the oculist changed them giving him another pair which were no better. As he was unable to use them he had an optician in his home town fix him up a pair, but they were no improvement. His teeth had been gone over carefully by a dentist so that it did not seem as if that could be the source of the trouble. With this history to start with I gave him at once something to move his bowels freely and five grain doses of aspirin three times daily. As he did not have his glasses with him I prescribed O.D+3.00 D.S., O.S.+2.75 D.S⌒+.25 D.C. ax. 180 for reading. Eight days later he returned and reported that he had been entirely comfortable and could use his eyes as much as he pleased. My knowledge of the ability of the oculist who gave him the two pairs of glasses assures me that the glasses he prescribed were not far wrong, so that I feel confident it was the systemic treatment he received from me and not the glasses that made him comfortable.

It seems clear that the ocular disturbance in these cases was caused by the irritation of certain branches of the ophthalmic division of the fifth nerve by toxic substances due either to defective metabolism or to decomposing material in the gastro-intestinal canal. In the one case the poison evidently was due to faulty metabolism as when the excess of uric acid in the system was overcome there was great amelioration of the symptoms. In the other cases it is not certain from whence the toxæmia came. We know that both uric acid and poisons derived from intestinal putrefaction frequently cause neuralgia of the first division of the fifth nerve and it does not seem difficult to believe that either one or the other of these conditions was responsible for the ocular symptoms which we may liken to a neuralgia of the particular nerves involved. Whether the pain is caused by the irritation of the nerve fibres themselves or of the sensory cells connected with the fibres, the sensation is the same and is assigned to the terminal distribution of the fibres. The fact that in the one case local anæsthetics gave no relief indicates that the irritation was not at the distribution of the nerve terminals although it was

referred there. In this connection I recall a number of instances where patients have come to me complaining of having a foreign body in the eye. Most careful search failed to discover any foreign substance. In order to relieve the sensation I have used locally a solution of cocain or holocain and failed utterly in my effort. Inquiry has always developed the history of disturbance of the digestion or some symptoms of autointoxication.

These, with other similar cases, lead me to the conclusion that faulty metabolism as well as intestinal autointoxication is responsible for some of the stubborn cases of conjunctival irritation and asthenopia with which we meet.

INJURY TO THE EYE.

A. Elschnig (*Deutsche Med. Woch.*, Jan. 5, 1911) presents the general principles in treatment of trauma of the eye, remarking in regard to the prognosis that all nervous disturbances in the orbit resulting from pressure of extravasated blood in the region are capable of complete retrogression, while direct lesions of the nerves usually persist unchanged. Special care must be taken to prevent the drying or ulceration of the cornea when the eyeball protrudes or the lids do not close perfectly. If inflammation develops in the orbit from infection from the nose, the prognosis is almost inevitably bad. Emphysema, on the other hand, has an excellent prognosis. Treatment of all fractures deep in the orbit should be exclusively conservative. With much suggillation a compressing bandage, ice-bag and complete repose may be indicated. Only with extreme protrusion of the eyeball or very severe emphysema is it necessary to relieve by evacuation of the blood at the most swollen part of the orbital tissue. Direct operative measures are necessary if there is a fracture of the walls of the orbit with dislocation. Compound fractures should be treated by the usual surgical principles. Elschnig adds, in conclusion, that in every extensive compound fracture of the orbit, as also in every case of extensive injury of the soft parts in which contamination with soil cannot be absolutely excluded, a preventive injection of tetanus antitoxin should be given.—*Jr. A. M. A.*

TRANSLATIONS.

ON COMA DUE TO MYXŒDEMA.*

By Dr. M. Hertoghe.

(Translated by Adolf Alt, M.D.)

Insufficiency of the thyreoid causes a pronounced malnutrition of the whole organism.

The removal of the albuminoid elements no longer is accomplished according to the normal type by which it ends in the azotic molocule in the urine. Furthermore, the fats are not burnt as they should be. This leads to the accumulation of albuminoid and fatty material. This accumulation shows itself by an infiltration, or perhaps better, by a special characteristic œdema.

The incomplete destruction of the albumens encumbers the tissues with a material, called mucin. The chemical analysis has shown an abnormally great quantity of this in the tissues of individuals who had died from the myxœdematous cachexia.

The adiposity of the tissues in these patients is astonishing. In a woman dead from cachexia strumipriva we have found the abdominal cavity filled with an enormous mass of fat hard like congealed lard and it was impossible to force the intestines out of their cavity.

All of our tissues are subject to nutrition and malnutrition. None escapes this residual infiltration. This is the cause of universality of the lesions and symptoms due to the thyroid impoverishment. The myxœdema is, of necessity, a disease of the whole organism. All of the tissues, all of the organs are attacked by the same stroke. The symptoms vary only under the influence of age and of the intensity of the attack. It is not the object of this paper to describe all the symptoms. This would go too far.

I simply propose to refer to some disorders of the *nervous* system with the desire to inform the medical public of some things little known and yet of very great importance.

The central nervous system on account of the incompressibility of its elements suffers quite early from the myxœdematous in-

*Bulletin de l'Académie Royale de Médicine de Belgique, February, 1911.

flammation, slight as it may be. In the first place there are special attacks of migraine, more severe in the morning after the cooling of and inanition of the night, disappearing during the day thanks to the warming up by nutrition and muscular action. They are often accompanied by occiptal neuralgia.

These attacks are intermittent, come on after unusual fatigue, even after moderate use of alkohol, and abuse of tobacco. They are intimately connected with all causes which diminish the production of organic thyreoidin.

The menstrual migraines are due to the extroardinary demand for thyreoidin which the inhibition of the menstrual function requires.

When the thyreoidin impoverishment is a little more advanced the migraine gives place to continuous headache and to a feeling of weight in the head, especially the forehead. An intellectual torpor gradually comes on, increasing step by step.

At first this is rather an indifference, a hesitation when judging of a situation or solving a question. The intelligence, though acting slowly, is intact. The fatigue of thinking becomes so great that the patient prefers not to take part in a discussion, even if his own interests suffer thereby. Speech becomes very difficult on account of the lingual and pharyngeal infiltration.

To the non-initiated it seems that the patient gradually develops a state of mental hebetude, of softening of the brain.

At the same time phænomena of the central auditory organ become noticeable, as noises, auditory hallucinations, incessant tinnitus. The patient is almost always suffering from a very disagreeable vertigo.

Soon the general infiltration of the muscles makes walking uncertain and difficult. The patient falls; he falls without any provocation, and without losing consciousness. He does not try to save himself, or to get up again. He shows neither annoyance nor surprise. If he is put on his feet he goes quietly on his way if he has not broken or dislocated a limb, and this does not rarely happen.

In a more advanced stage of the disease the psychical indifference is aggravated into a state of continual somnolency. Sleep becomes imperative, even in daytime. The patient falls asleep everywhere, at his desk, in a carriage, or the railroad, and in the doctor's waiting room. A priest whom I treated fell asleep on the train reading his breviary. His book of the hours escaped his hands and the pious pictures were strewn over the floor. Somebody picked them up and handed them to him. Five

minutes later he slept again and the same scene repeated itself.

During the night sleep is even heavier. The brain loses all inhibitory influence on the medulla, the sphincters give way and the patient wets his bed. This sleep does neither strengthen nor repair. It is interrupted by nightmares and horrible hallucinations. In the morning the patient is removed from his bed against his will and is more tired than the evening before.

In other cases the cerebral infiltration causes real epileptic seizures which yield to thyreoidin treatment, but return when the remedy is left off.

I had one such case. The patient neglected the treatment and died in a seizure.

Finally the cerebral œdema causes coma, similar to diabetic or albuminuric coma and this leads us to the main points of our paper.

Myxœdema is almost always mistaken for something else, especially for Bright's disease.

The different cerebral symptoms which we have just described, the torpor of the intelligence, the headache, the slowness of speech, the vertigo, the noises in the ear are attributed to uræmia and do not astonish the physician. His diagnosis is victoriously confirmed by some albumen in the urine, some intestinal or nasal hæmorrhages, which frequently occur in thyreoidin impoverishment.

Most of the physicians content themselves in Bright's disease with a superficial examination of the urine. Azotic acid gives a considerable cloudiness even with small quantities of albumen, and the microscopic examination of the sediment is almost always neglected.

But just here lies the differential diagnosis between myxœdema and Bright's disease. In myxœdema the quantity of albumen is slight, seldom over a fourth of a gramme to one thousand.

Some pavement epithelial cells from the bladder are found, but no formed elements from the kidney.

The physician is not astonished to see his albuminuric patient fall into coma. He really expects this. His conscience is at rest.

Yet, when the urine contains no sugar and no albumen the ætiology of the coma becomes much more difficult of explanation. It may happen even with a myxœdematous patient, that the symptoms of lack of thyreoidin are not clear, uncertain or masked by more severe morbid phænomena.

The patient whom I present to you here came to consult me about a year ago, in April, 1910. He is 52 years old.

Eight years ago, following violent headaches, his *vision commenced to fail.* A well known oculist stated that he had *white atrophy of the optic nerves.* He is not epileptic and the cause of his disease was a mystery. No sugar nor albumen in the urine. He was pale, anæmic, the red blood cells were diminished in number, while the leukocytes were markedly increased. In 1907 after a fatiguing trip he came home exhausted and fell at once into a completely comatose state. Movements, sensitiveness, consciousness were entirely abolished. In this condition he remained three days, then he came to and did not remember anything. His weakness increased, as did his anæmia, from day to day. His vision became continually less. This was his condition in April, 1910.

Now, even to a careful examiner, he shows nothing of the characteristic swollen appearance of myxœdema.

You will remember that in former papers on thyreoidin insufficiency I dwelled on the hereditary character of myxœdema and that I insisted on the absolute necessity of getting acquainted with several members of the family when thyreoid degeneration is suspected.

For some time I had been acquainted with a brother and a sister of this man. The brother had been myxœdematous and I had cured him. The sister, also, plainly showed the stigmata of myxœdema.

Let us return to our patient with optic nerve atrophy.

I acknowledge I should never have recognized the myxœdema in him, had I not known of his family.

A detailed examination, however, showed him very plainly to be the subject of thyreoidin insufficiency. The hypoglobuly, the hyperleukocytosis which were quite pronounced, as well as the atrophy of the optic nerves, veiled the true picture.

His temperature was subnormal, the growth of his hair was irregular, his skin dry and cracked. He had vertigo, persistent head ache, tinnitus and very annoying attacks of asthma. Joined to these was an extreme feebleness of all the muscles, stiffness of the joints and somnolency.

In spite of a marked anorexia this man weighed 192 pounds. He was infiltrated and yet this general infiltration was not as apparent as in other cases.

Treated with thyreoidin he lost 20 pounds in less than one year. The optic nerves have not recovered. This could not be

expected, but his health is perfectly re-established. He has regained his strength and activity. He is cured of his myxœdema and if at any time for lack of treatment coma should seize him, the cause and the remedy will be known.

The case which I now present to you is one of the most remarkable cases of myxœdema that I have ever encountered. He is 62 years old and has no idea when he began to suffer.

He remembers to have had at times violent headaches. Gradually he felt himself overcome by an indefinable and irresistible intellectual torpor. He is extremely chilly. His hands are icy. In spite of an incredible amount of clothes during the day and of covers during the night he cannot keep warm.

His face is swollen and the heavy eyelids cover the eyeballs. His fatigue is extreme. His walk is straining and painful. Mounting a few steps causes intense suffocation. This is caused by the infiltration of the lungs and the weakness of the muscle of the heart. His anorexia is complete. He hates meat and eats almost nothing. He is completely infiltrated and in spite of the malnutrition weighs 192 pounds. His skin feels cold, the epidermis is dry and cracked. He has a perpetual vertigo and incessant tinnitus. He is subject to an invincible desire to sleep and falls asleep everywhere. During the night his brain loses all control over the medulla and the sphincters give way. He is deeply depressed and melancholic. He feels unable to react against the weight which oppresses him. His judgment, which is still good, allows him under all circumstances to solve the problems which his affairs offer. But the fatigue of thinking, speaking and discussing is too great and thus he is an easy victim of his commercial opponents. He has fallen in the street several times and has fractured one humerous and dislocated the other.

Arrived at this degree of impoverishment it is not astonishing to find on him inquieting signs of hæmophilia. A nasal hæmorrhage lasted for five days. The end was expected hourly. My colleague and friend, Dr. Sweerts, had the ingeneous idea to make him a subcutaneous injection of antidiphtheritic serum. This stopped the bleeding at once when hope seemed lost.

Three years ago after a day of vertigo he fell suddenly into coma. This lasted twelve hours and he was deprived of motion, sensibility and consciousness. The coma was thought to be due to Bright's disease, because it had long been known that his urine contained albumen.

(The patient's sister had died when 60 years old and her death

had been attributed to Bright's disease. The author, however, believes that she, too, was myxœdematous.)

Treated with thyreoidin, the patient showed a perfectly surprising reaction. Under the influence of a single pastille of 30 centigrammes (Burroughs & Wellcome) a day, he last 250 to 500 grammes of weight daily.

This small dose exerted upon him such an energetic influence that a week later I thought it wise to discontinue the treatment. The temperature rose above the norm. A violent oppression forced the patient to spend the night in a chair. The heart had to be stimulated by digitalis, caffein and small doses of cognac. The rapid return of the exudation into the muscles and into the sheaths of the tendons of the foot caused very violent pains simulating gout. During the night there was continuous agitation and hallucinations, in daytime he talked incessantly. The nightly enuresis disappeared after a few days never to return. At the end of three weeks the function of the skin became active. The patient who had for years always felt cold, one morning woke up bathed in sweat.

The interrupted treatment was resumed with extreme carefulness. He received now the tenth of a pastille only. After one month he had lost 28 pounds. Although this disturbed his family, especially since the function of his stomach did not improve, I predicted an early improvement of the appetite. Soon the hate of meat disappeared and the patient began to get nourishment. Still his weight decreased. Then new troubles arose. One morning the patient coughed up enormous masses of mucous. His family believed he had tuberculosis. Yet the mucous was clear.

The patient was formerly hypermetropic and could not read without glasses. Now he laid them aside.

He rode in a carriage without falling asleep during the day. In spite of his improving nutrition his weight kept on decreasing. The morning expectoration became less as the lungs became relieved of the infiltration. After 60 days he had lost 40 pounds.

The cure is now complete. The patient has resumed his business. He mounts stairs without effort or dyspnoe. He eats with a good appetite. His weight keeps between 182 and 186 pounds. He receives a pastille and a half.*

*Here follow some further remarks on the use of thyreoidin, which are omitted, as of no special interest to oculists. (The Translator.)

MEDICAL SOCIETIES.

OPHTHALMIC SECTION

of the

ST. LOUIS MEDICAL SOCIETY.

Meeting of April 5th, 1911.

Dr. M. H. Post in the Chair.

Dr. C. Loeb presented a patient whom he had seen for the first time ten days ago, when she came to the Eye Clinic at the Alexian Brothers' Hospital, giving a history of having been operated on at the age of 14, for congenital cataract in both eyes. The operation was successful in that the patient was afterwards able to read, with proper glasses.

Nine years ago, during a pregnancy, she awoke one morning to find the left eye totally blind, and one and a half years later, the right eye became suddenly blind. Patient states that an operation was performed on her left eye one and a half years ago, the nature of which she does not know. Probably an optical iridectomy. The result was bad, and the globe is now shrunken. At present the right pupil is dilated with atropine, and the lens capsule with a small central opening the size of a pin head is visible. In the fundus can be seen a white mass. No retinal reflex except in the extreme temporal periphery. The patient says she can distinguish light and there is some slight power of projection.

Dr. Loeb regards the condition as a pseudo-glioma, probably originating as inflammation of the choroid and vitreous body.

Dr. Saxl considers this a case of hyalitis, the vision lost through an extensive hæmorrhage into the hyaloid body, connective tissue forming subsqeuently. The decrease in tension is the best proof of shrinkage of the hyaloid. In cases of congenital cataract the vitreous is not very firm; and during pregnancy nephritis frequently leads to hæmorrhage, and a severe one must have taken place here.

Dr. Jennings agreed with Dr. Saxl that the condition is probably the result of an extensive hæmorrhage.

Dr. Parker asked if there could probably be anything gained from a diagnostic standpoint by doing an iridectomy, thus getting a larger pupil for fundus examination.

Dr. Loeb believed iridectomy in this case hardly justifiable because of the risk of taking away the slight light perception. The making of a larger pupil by a secondary cataract operation might, however, be feasible. He asked to have an expression of opinion as to whether subconjunctival injections might produce unfavorable results; and in case this mass in the vitreous be not organized, might any benefit from such treatment be expected.

Dr. Post thought the point well taken as to the avoidance of jeopardizing, by operation, the small amount of vision remaining. He did not favor injections in this instance. As to the iodide treatment, he mentioned a case that came to his clinic some years ago with proliferation of connective tissue in the vitreous, and he had prescribed iodide of potassium, without much hope of benefit, but the patient had appeared at the clinic from time to time, and claimed that his vision was improving. He disappeared for two years and on returning, the Doctor was surprised to find the vision comparatively good. Iodide of potassium had been taken continuously.

Dr. F. P. Parker presented a case which had been seen by him at Washington University Eye Clinic the 8th of February, and which he diagnosed embolism of the central artery. Vision at that time was shadow perception at one foot on the temporal side. Ophthalmoscopic examination revealed very small arteries, veins dilated, retina œdematous, and a cherry red spot in the fovea. To-day he had found that the red spot had almost entirely disappeared, and the disk has become yellowish-white. Pressure and iodide of potassium had been used.

Dr. Jennings thought it a typical case of embolism of the central retinal artery. Treatment to be of any value would have to be instituted before 24 to 36 hours have elapsed. In a recent case of his own, he had made considerable pressure on the eyeball, and suddenly released the tension in order to drive out the plug. The patient was then sent home and given inhalations of amyl nitrite. The circulation was restored by the next day and the patient ultimately recovered with very good vision.

PAPER.

Unilateral Retinitis Pigmentosa.—By Dr. J. Ellis Jennings.

In a typical case of Retinitis Pigmentosa the symptoms are so characteristic that a diagnosis is made without difficulty. First

of these is "night blindness", in which the patient sees quite well in the day time, but very poorly at night. This is accounted for by a marked concentric contraction of the field of vision, which slowly creeps toward the macula region, so that in time the patient, while having fair central vision, is unable to move about alone. When an ophthalmoscopic examination of the fundus is made these subjective symptoms are found to be due to a slowly progressive degeneration of the retina. We find at the periphery of the fundus, characteristic patches of black pigment arranged in the form of bone corpuscles or teased out moss. They are found especially along the course of the blood-vessels and in places lie on top of them. In course of time the pigmentation slowly advances toward the center. Associated with the pigment changes are atrophy of the retina and optic nerve and very marked contraction of the retinal bloodvessels. The disease affects both eyes, is probably congenital, and often inherited. One third of the cases occurs as a result of the consanguinity of the parents. While the above symptoms described the ordinary form of the disease, there are typical cases in which all the symptoms mentioned are present except the patches of pigment.

The case I wish to present is unusual in that it has but two or three typical patches of pigment and is further remarkable in that only one eye is involved.

Miss S. R. aged 35, consulted me December 10, 1908, on account of fatigue after reading or sewing. She appeared to be in perfect physical condition and had always enjoyed good health. The family history was good and her parents are not related. She has three brothers all seemingly with normal sight. I examined the eyes of her younger brother and found them normal.

Examination of patient.—Vision, right eye V=5/15, with—0.75 sph.=5/9; left eye V=5/5, with +0.25 sph.⊃+0.25 cyl. ax. 90°=5/5.

While testing her vision the patient said, "Don't bother with the right eye—the vision has always been poor—in fact the eye is practically blind unless I look directly at an object." I then tested the field of vision with the following result:

Right eye.—Contraction of the visual field in all directions to within 8° of the fixation point.

Left Eye.—The field of vision is absolutely normal.

Ophthalmoscopic Examination:

Right Eye.—Optic disc pale and waxy looking, arteries and veins of retina very much contracted and scarcely visible at the periphery. The eye-ground has a washed out look and the cho-

roidal vessels are clearly seen, no patches of choroiditis. At the extreme periphery I found a few small specks of pigment and on the nasal side, two or three of them covering a retinal vessel.

The fundus of the left eye was carefully examined, the optic nerve and retinal vessels were normal, and search as I would, I found no trace of pigmentary degeneration. In fact the eye-ground was perfectly normal.

DISCUSSION.

Dr. Saxl: Cases of retinitis pigmentosa do not seem to be frequent in this country. I have not seen many here, but quite a number in Europe, and am convinced that the condition has an anæmic basis. The retina is not pink but yellow, and has a washed out look. I have never seen any other than the bone corpuscle form. In regions where nourishment is very poor, as in Russia during the time of the long fast, and in poor neighborhoods that are frequently inundated, night blindness occurs. I have seen as many as five cases in six months, but without any retinitis.

I saw in a family in New York a most pronounced case of retinitis where father and mother were perfectly healthy and the living conditions most favorable. This case of Dr. Jennings is the second I find under such favorable conditions. Whether syphilis has any connection with it I do not know—it does not seem so to me.

Dr. Owen: This is quite an uncommon condition, and has always been a most interesting one to me. It is my idea that this process starts from a lesion of the choroid.

Dr. Loeb: In regard to the rarity of the retinitis pigmentosa, I have had two cases in about 250 patients at the Alexian Brothers' Hospital, since the clinic started.

Dr. Post: One family in which retinitis pigmentosa occurs has been coming to our office for a number of years. They are well-to-do, well-nourished people. They show no evidence of malnutrition. I would like to ask Dr. Jennings if he has come across any reports of cases of monocular retinitis pigmentosa.

Dr. Jennings: I have not been able in the researches I made to find any cases at all similar. This young woman comes from a family in comfortable circumstances, so that she could have everything that would nourish her and keep her in good physical condition. She has no ear trouble or other ailment, and is a fine specimen of womanhood.

J. G. CALHOUN,
Section Editor.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

(Thursday, March 9, 1911.)

Dr. G. A. Berry, President, in the Chair.

CASES.

Crystaline Opacities in the Cornea; two patients in the same family.—Mr. H. Grimsdale.

The central area of each cornea of a woman, aet. 67, showed opacities of the shape of frost crystals, which were interstitial and on different levels. The epithelium was not raised. The case had been watched 8 years and was slightly progressive. A cousin was similarly affected.

A Fixation Speculum.—Mr. W. H. Brailey.

On each side of the lower blade of a Clark's speculum were fixed a set of prongs which, engaging on the ocular conjunctiva, depressed the globe with the lid so that forceps were not required.

Microscopical Section of Neoplasm involving the Iris, from a case shown November 10.—Mr. F. A. Juler.

The growth was a melanotic sarcoma; it was not certain whether the site of origin was the root of the iris or ciliary body. The lens was curiously indented by pressure of the growth.

Sarcoma-like Growth of the Iris.—Mr. Chas. Wray.

Woman, aet. 28, noticed a spot in the iris 15 years ago; since then it had grown, and rapidly the last two years. V=6/6, field full.

Mr. Lawford thought it might be a melanotic mole which was now sarcomatous; he inclined to excision of the globe.

Cirsoid Aneurism of the Face.—Mr. E. W. Brewertown.

A woman, aet. 32, had an injury at 3, the scar had grown steadily until now the frontal region upper lid and the orbit were invaded by a vascular growth. Vision was reduced to counting

fingers, fundus was normal. It was suggested relief might be obtained by ligation of the external carotid artery.

Case of Advancing Keratitis.—Mr. H. W. Eason.

A man, aet 42, had iritis in December, 1909. Since then there had been a gradual advancing deep keratitis spreading from the periphery to the centre; there was keratitis punctata. v. Pirquet's reaction positive.

PAPERS.

Three Cases of Optic Nerve Tumors.—Mr. Hill Griffiths.

(1) Female, aet. 12, had increasing proptosis of the right eye 8 years; lately ocular movements were partially restricted and backward pressure gave a sense of resistance. There was some optic atrophy. Other eye normal. Exenteration of the orbit was performed. A large intra-dural growth of slightly lobular form was found of three times the size of the globe. On section it proved cystic; the swollen nerve passed through it. The growth was a lymphangioma.

(2) Female, aet. 2½, with recent proptosis and well-marked and increasing optic neuritis. Exenteration was performed. An intra-dural fusiform growth was found which evidently penetrated the optic foramen into the cranium. Microscopically it proved to be a glio-sarcoma; the younger cells had distinct delicate processes.

(3) Female, aet. 30, rapidly increasing proptosis of left eye. Recent optic neuritis. Vision diminished to 6/12. On exeneration a large loose lobulated extra-dural growth was found; the nerve was free before and behind the growth. Microscopically it was an endothelioma.

The author discussed variations in operative procedure and the possibility of disguising the resulting deformity.

The President remarked on the distinction of intra- and extra-dural growths.

Mr. Treacher Collins considered the author tended to confuse orbital and extra-dural tumors; they were distinct. Intra-dural growths did not appear to be very malignant, they were neuro-fibromata. He laid stress on the significance of an advance of hypermetropia as a symptom of retro-ocular growth.

Mr. J. H. Parsons said both extra- and intra-dural growths were very similar, there was a fibromatosis of the nerve sheath

with subsequent myxomatous degeneration from pressure and œdema.

Mr. G. Coats objected to the term glioma, gliosis was a better term.

Mr. Frank Thomas showed drawings of a case he had observed.

Mr. Jameson Evans said he had seen effective artificial lids and globes made by Salt of Birmingham. He did not consider exenteration necessary, removal of the eye and growth was enough. He had watched one case 8 years, another 5, and there was no recurrence.

A Morgagnian Cataract: Operation: Remarks.—Mr. Johnson Taylor.

A patient had had cataract diagnosed 25 years ago; at the time of examination an immature cataract was found; projection was bad, but pupil reactions were good. An iridectomy was made and the cataract extracted at a later date. There remained only a cyst containing opaque milky fluid. No nucleus was found. V=6/12.

A Peculiar Form of the Granuloma of the Retina.—Mr. Frank Thomas and Mr. George Coats.

A lad, aet. 18, suffered a febrile attack with otorrhœa in 1908. The left fundus showed what appeared to be an enormous red disc surrounded by a ring of swollen nerve fibres. The other eye was normal. Two years later the eye was blind, glaucomatous, and there was detached retina; it was excised. On section there was found an oval yellow mass (4 mm. by 2.5 mm.) in the stalk of the detached retina close to the papilla; the growth was purely retinal and consisted of densely crowded cells with very little stroma, there were signs of old iritis. Determination of the nature of the growth was difficult, a diagnosis of inflammatory granuloma carried fewest objections.

CORRESPONDENCE.

Philadelphia, Pa., April 27, 1911.

Dr. Adolf Alt,
St. Louis, Mo.

Dear Doctor:

The next meeting of the Oxford Ophthalmological Congress will assemble in Keble College, Oxford, the evening of July 12, 1911. The meeting is both scientific and social in character. The mornings are devoted tc addresses, and demonstrations of apparatus, instruments, and examinations of microscopic specimens. The afternoons are given over to clinical demonstrations and operations by prominent British and Continental ophthalmic surgeons. In the evenings the members of the Congress gather socially in the Junior Common room of Keble College.

The town of Oxford presents a fascinating mixture of mediæval and modern England. One can wander up and down High Street with its business and bustle or seek the quiet of the various college quadrangles, gardens and grounds. On Saturday afternoon the usual excursion will be made for some miles down the Thames.

Quarters may be had at Keble College in the dormitories with meals in the great dining room at 7 shillings 6 pence (or $1.87) per day. Those who prefer to live outside the College will find much comfort at the King's Arms, a rather up-to-date hostlery, at about $2.50 per day; or at the historic old Mitre Hotel, over 200 years old, at from $3.00 to $4.00 per day. These prices include board and lodging.

The entrance fee is 5 shillings. There is no annual subscription, but a contribution of 10 shillings 6 pence is payable on each occasion that a member attends the Congress. If you are thinking of going to Europe this summer you will find the Congress worth your while. All the proceedings are in your own language and much that is absolutely new is to be found at each meeting.

Sincerely yours,

WENDELL REBER,
For the Council.

AMERICAN BUREAU OF INFORMATION

Of the International Committee for Post-Graduate Medical Education.

303 East Twentieth Street, New York City.

The Delegates of the United States to the International Committee for Post-Graduate Medical Education will maintain a Bureau of Information on Medical Education, particularly Post Graduate Medical Education. All available information on this subject will be kept on file for the benefit of those who inquire personally or by mail about the educational facilities in the different medical centres of the world. This Bureau of Information will be located at 303 East 20th Street, New York City, and will bear the name of: American Bureau of Information of the International Committee for Post-Graduate Medical Education.

All communications should be addressed to "Medical Information Bureau, 303 East 20th Street, New York City." Communications requiring answer must be accompanied by stamped envelope.

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F.R.S., London; Dr. E. B. Pickthorn, London, besides for India; Sir Benjamin Franklin, K.C.I.E., London; Sir Havelock Charles, K.C.V.O., London.

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Dr. R. Blondel, Paris (as assistant of the committee.)

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Greece—Prof. Dr. Kallionzis, Athens; Priv. Doz. Dr. Mermingas, Athens; Prof. Dr. Savas, Athens.

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Norway—Medizinal-Direktor M. Holmboe, Christiania; Prof. Dr. Johannessen, Christiania; Prof. W. Uchermann, Christiania.

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Switzerland—Prof. Dr. Bourget, Lusanne; Dr. G. Feurer, St. Gallen; Prof. Dr. Kocher, Bern.

INDICATIONS AND AGE FOR STRABISMUS OPERATIONS.

H. Ronne (*Hospitalstidende*, Nov. 2, 9 and 16, 1910) bases his remarks on 3,865 operations for squint at the Haonegade Ophthalmologie Clinic during the past forty years. He favors early operation contending that normal restitution will take place more quickly when the parts are put in approximately normal condition early. The correctness of his views seem to be established by the tabulated outcome of his cases. He says that early operations do not tend to greater liability to secondary strabismus. The operation was performed on infants under a year old in twelve cases; under two years in forty-two; under three years in one hundred and ninety-three; up to four years in two hundred and ninety-seven; up to five years in three hundred and fifty-five; and up to six in three hundred and seventy-eight.

OBITUARY.

Hermann Knapp.†

Hermann Knapp is dead. Another of the men who were present at the birth of modern ophthalmology and who helped to bring our science so rapidly to a height before then unthought of, is gone. He was a man of great erudition and learning, a man with an enthusiasm for work and with a working capacity as is given to few only. As an investigator he has left his name in big letters on the pages of scientific history. As an operator he was unsurpassed in steadiness, coolness and accuracy. As a teacher he was clear and impressive. No wonder that pupils came to him from far and near. He is one of our immortals. His name will live, blessed by rich and poor alike, even after all the eyes to which his carefully trained hands have restored sight, that priceless boon, will have been closed like his for ever.

Hermann Knapp was born on March 17th, 1832, at Dauborn, Germany. He studied medicine at the University of Giessen where he graduated in 1854. His father's wealth and liberality then gave him an opportunity to increase his store of knowledge by visiting the then best known places of learning and eye clinics. Thus he studied at London, Utrecht, Paris, Berlin and Vienna. After four years of travel and hard work, he took up his abode at Heidelberg and there qualified as Private-Docent. Here he founded the Eye Clinic and Hospital which was one of the first of such institutions at German Universities and which was later taken over by the Government. In 1862 he was appointed Professor extraordinarius of Ophthalmology. Here he soon enjoyed not only a very high renown as a scientist and operator, but also enjoyed a large ophthalmic practice. After a short visit to New York he decided in 1869 to remove to this city where he very soon found a field worthy of his best efforts. The New York Ophthalmic and Aural Institute and the Archives of Ophthalmology and Otology are the two chief monuments of his work.

After an enormously active and successful career as practicing oculist and aurist, scientific investigator and teacher, ill health forced him a few years ago to withdraw from the work that he loved so well. Now he has succumbed to an attack of pneumonia on May 1st.

Hermann Knapp's pupils and former assistants are to be found

distributed all over this large country. His spirit, characterized by unceasing work and continued endeavor to enlarge our knowledge for the benefit of our fellowman, must have to some extent infected everyone of them. In this he has left to this country a legacy which can hardly be overestimated.

He cannot be forgotten. ALT.

The ranks of well-known American ophthalmologists have in a short space of time suffered still further severe losses in the persons of:

Charles A. Oliver, of Philadelphia, Pa.
Charles S. Bull, of New York City.
Leartus Connor, of Detroit, Mich.
Henry Gradle, of Chicago, Ill.
Albert R. Baker, of Cleveland, Ohio.

Of this number Charles A. Oliver was, perhaps, the best known, partly on account of his association with Norris in the getting up of their System of Diseases of the Eye, partly on account of many special articles and his connection with the "Ophthalmoscope."

ABSTRACTS FROM MEDICAL LITERATURE

BY J. F. SHOEMAKER, M.D.,
ST. LOUIS, MO.

OBSERVATIONS ON CONICAL CORNEA WITH THE REPORT OF A CASE SUCCESSFULLY OPERATED UPON.

P. N. K. Schwenk (*Penn. Med. Jr.*, August, 1910) says that, while the cause of conical cornea is not definitely known, it is safe to assume that it is due to some trophic disturbance of congenital origin by which the resistance of the corneal tissue is lessened, allowing the central part of the cornea to yield to the intraocular pressure until it becomes the shape of a cone. As yet no definite anatomic changes have been demonstrated as characteristic of primary keratoconus. It has been frequently said that this condition does not manifest itself until after about

the age of twelve, but Schwenk believes that these statements have been made because until very recently there has been no systematic examination of the eyes of children and they have not been able to make known their defects until they grew older. In his case defective vision was noted very early in life and he regards the condition as congenital. The author states that Bull claims that the cornea, no matter how thin it may become, never ruptures unless by accident, and that Bowman explained this fortunate resistance as being due to the fact that, as the cornea becomes thinner, the escape of the aqueous humor, by exosmosis, is facilitated, thus reducing the internal pressure so that a balance is established. Inflammation of the cornea is not an ætiological factor. Mauchart of Tubingen is said to have described this condition as "translucent staphyloma" in 1748, being the first to make a definite diagnosis of this affection. The condition is generally bilateral. When one eye only is affected it is usually not long until the second eye becomes involved.

All that is possible should be done to improve the vision by optical measures before resorting to operative interference, but when the condition keeps going from bad to worse some form of operative procedure should be employed. The different operative measures that have been recommended are referred to, the most satisfactory of which the author believes is that of cauterization of the cornea with the thermocautery. He reports a case where by this method the vision which before the operation was with —2 D.S.⊃+18.D.C. ax. 160=6/22, while several years after the operation with +1.D.S.⊃—5.D.C. ax. 55 the vision was 6/9+. He says in conclusion:

In order to bring about either a good optical or surgical result in a case of conical cornea it is necessary for the patient to be intelligent, to understand fully the procedure you intend to apply to his case and the expected benefit.

If I should again have an opportunity to operate I would make two or three cauterizations, less in extent, instead of one more severe burn. The presence of the abscesses (at lid margins) after cauterization is not recorded by former observers, nor are the visual findings expressed. This patient having had an unchanged refraction for over two and a half years is sufficient evidence that it is permanent; and bringing an eye from 1/60 vision in a pathological state to 6/9 and quiescent is sufficient proof to advocate the surgical procedure to be worthy of support in future cases.

OPTIC NERVE CHANGES ASSOCIATED WITH CRANIAL MALFORMATIONS.

Alfred Gordon (*N. Y. Med. Jr.*, Jan. 7, 1911) refers to five clinical types of cranial malformation associated with visual abnormalities, considered by C. A. Oliver some time ago. They are scaphocephalic, leptocephalic, trigonocephalic, occipitoparietal, and oxycephalic. He says:

"Scaphocephaly consists of a boatshaped form of the cranium in which the forehead is unusually broad. The deformity is probably due to an irregular union of the sagittal suture between the inner margins of the parietal bones.

"Septocephaly represents an unusual smallness of the entire head. It is the result of a premature union of the frontosphenoidal suture, situated between the alæ of the frontal bone and sphenoidal bones.

"Trigonocephaly is a deformity of the cranium in the shape of a three cornered body with its small end placed anteriorly. It is produced by an abnormal ossification of the frontal and parietal bones at the level of the corneal suture.

"The occipitoparietal type for which Oliver deserves credit in calling attention to it is a rare form. It presents a flattened curving of the posterior portion of the cranium, and it is due either to a premature synostosis of the occipital suture, or to an abnormal union of the medial portion of the lambdoidal and postero-inferior part of the sagittal suture at the level of the posterior fontanelle.

"The oxycephalic type is the most frequent. It is characterized by a steeple-shaped or dome-like head. It is probably caused by a premature or improper synostosis of the parietal bones with the occipital bone, and compensatory development in the region of the sagittal suture."

As has been pointed out by H. Friedenwald, most cases of oxycephalic deformity show post-neuritic atrophy of the optic nerve and the vision is more or less impaired, varying from almost full vision to total amaurosis. Virchow and Hirschberg have taught that the cause of the optic atrophy is an inflammation of the meninges and of the bone, while Friedenwald believes that the increase of intracranial pressure, resulting from the arrested development of a part of the skull is responsible for the optic neuritis which later causes optic atrophy. Gordon thinks that probably both views are correct. He reports a case of oxycephaly in a boy eight and one-half years old, who presented the

following ocular symptoms: exophthalmus, lateral nystagmus of both eyes and rotary nystagmus of the left, (also head nystagmus) chorioretinitis and optic nerve atrophy in both eyes. The fields of vision were contracted in both eyes, worse in the left, and the vision was 6/30 with both eyes, unimproved with glasses. Previous to the third month of his age he appeared prefectly healthy and normal. At about this age he had a number of infectious diseases,—measles, pneumonia and severe diarrhœa, after which time his mother noticed that his head grew very large and became dome-like. After the third year he developed epileptic seizures. Aside from the peculiar shape of his head, the ocular abnormalities and the epileptic seizures he seemed quite normal, except that he complained of a great deal of headache. Increasing doses of the iodides improved the headaches decidedly and greatly reduced the number of epileptic attacks. The author believes the deformity of the skull probably resulted from the inflammatory disturbances in the meninges and bones caused by the infectious diseases. Doubtless an old pachymeningitis caused by these conditions was responsible for the convulsions and the severe headache.

BOOK REVIEWS.

ARBEITEN AUS DER UNIVERSITÆTS-AUGENKLINIK FREIBURG i/B. Director Professor Dr. Th. Axenfeld. (Papers from the University Eye Clinic at Freiburg i/B. Director: Professor Dr. Th. Axenfeld).

In this volume are collected reprints of all the papers previously published by Axenfeld and by his pupils and assistants under his personal influence and direction in the *Klinische Monatsblætter* and other journals. The amount of work stored up in these pages, as well as the variety of the ophthalmic subjects touched upon is something amazing. It reflects the greatest honor on the gifted and diligent director of the Freiburg Eye Clinic whose admirable personality stands out clearly in this work. On the other hand he is to be congratulated on the kind of men he has had the opportunity to teach and to stimulate into elaborating his ideas under his supervision.

ALT.